or antibodies using the protein chip composition of this invention.

It is yet a still further object of the present invention to provide a method of ligating together two recombinant proteins.

It is also a further object of the present invention to provide a method for NMR spectroscopy using proteins segmentally labeled by the provided method.

It is still further an object of the present invention to provide a method of segmentally labeling a protein.

Finally, it is also an object of the present invention to provide a method of generating a cytotoxic recombinant protein by ligating together the non-cytotoxic segments of the protein.

BRIEF DESCRIPTION OF THE DRAWINGS

FIGURES 1-1B. is a diagram showing the phosphotyrosine tails in Src and Csk. In **FIGURE 1A**, the diagram shows that the phosphorylation of the Src tail on tyrosine is catalyzed by Csk. This phosphorylation results in a conformational change involving an intramolecular interaction between the Src tail and the SH2 domain. In **FIGURE 1B**, the diagram shows that *Csk* is highly homologous to Src but lacks a C-terminal tyrosine-containing tail. Proposed ligation of a phosphotyrosine tail might lead to a conformational change like that found in Src.

FIGURES 2-2B. is a reaction scheme showing the synthesis and characterization of semi-synthetic proteins via the method of expressed protein ligation. In the first step, the gene or gene fragment is cloned into the commercially available PCYB2-IMPACT™ vector (New England Biolabs) using the NdeI and SmaI restriction sites. Importantly, this cloning strategy results in the addition of a glycine residue at the C-terminus of the